Objection Responses Darby Lumber Lands Phase 2 Project Bitterroot National Forest – Darby/Sula Ranger District

Issue 1, National Environmental Policy Act (NEPA)

Issue 1.1 – Purpose and Need

Objectors contend the purpose and need statement for the project should specifically address project activities in Management Area (MA) 8b, as well as a statement to address agency responsibilities under the Travel Management Rule. The EA describes the purpose and need for vegetation, fuels, and transportation management actions proposed in this project (EA pp. 3 to 5). The justification and objectives for proposed treatments in MA8b are included in the EA (see p. 11). A Transportation Analysis Report was prepared in compliance with the Travel Management Rule.

Objectors specifically claim the project lacks justification and explanation for management actions in MA8b to create forage. The EA (p. 49) and wildlife specialist report (PF WILD-001-Wildlife Report) both discuss the relationship between management actions, Forest Plan direction, and scientific support for opening stands to stimulate forage production, and the effects of doing so on elk and elk habitat effectiveness.

NEPA does not require a separate purpose and/or need statement for each project activity, Forest Plan component, and relevant environmental statute. The purpose and need statement is not flawed.

Issue 1.2 – Preparation of an FEIS

Objectors contend that the Forest Service should prepare an EIS for this project due to significant effects. However, I find no supporting evidence in objections or comment letters to support an EIS. The disclosure of harmful effects does not denote the presence of significance, especially given the context of the project environment. The area has been extensively modified, including by recent private forestry practices and a poorly designed road network. The projected environmental harms to area resources, including wildlife and aquatic species and habitat, as the analysis supports, are limited, and in some situations, such as the planned transportation system improvement, are projected to improve current conditions.

Objectors claim an EIS is warranted because of uncertainty, unique risks, and scientific controversy associated with project activities. The risks and effects of the activities proposed by the Forest in this project are well-understood. Application of silvicultural systems in dry site ponderosa pine, design criteria for riparian habitat, culvert replacement and road recontouring, dust abatement – these all are standard Forest Service practices and activities, and are thoroughly supported by statute, applicable science, and monitoring results. The fact that contrary opinions may exist does not make these practices controversial, unscientific, or potentially significant. NEPA does not require the Forest Service to amass and explain an encyclopedic amount of detail when there is no risk of significance.

I find the Forest Service has taken the requisite hard look at the factors involved in its decision, and find no supportive reason to prepare an EIS for this project.

Issue 1.3, Need for Additional Alternatives

Objectors contend more alternatives should have been evaluated in the EA. The purpose of alternatives in NEPA is to address significant effects or reduce overall environmental harms while meeting the project objectives. As discussed in response to the request to prepare an EIS, the environmental analysis concluded that project activities would result in limited environmental effects. Additionally, the project is designed to meet multiple objectives, and the recommended alternatives fail to meet these objectives.

For instance, objectors allege the Forest should have considered alternatives to not conduct harvest in mistletoe infested trees, and to use prescribed fire only in MA8b, and selectively quote project file records to support objectors' contentions. However, the project file is clear that removing mistletoe infected trees meets project and Forest Plan objectives to move the project area toward desired future conditions (PF SILV-001). And while the silviculture report does state that MA8b fuels conditions could be treated without commercial harvest, again the purpose of treatments in MA8b is to optimize biggame forage production through habitat improvements, i.e., treatments to create openings. As stated in the Forest Plan standards for MA8b, even activity fuel treatments will be coordinated with the objectives of products designed to improve big-game forage habitat (Forest Plan III-61 MA8b Standards).

I find the project is in compliance with NEPA's requirements for consideration of alternatives.

Issue 1.4 – Best Available Science

Objectors contend the project does not use "Best Available Science" as required by NEPA. Objectors are not satisfied with the Forest Service's consideration of literature provided by the objectors. NEPA does not require the Forest Service to convene a panel of scientists to exhaustively review all of the literature provided by the public without regard to its implications for potential significance. For instance, an objector identifies literature by Dr. Diane Six as an example of literature that the Forest failed to consider; however, the Forest's response to this research is readily available in the project file (PF-LIT-003). The objector's response was that they are not satisfied with the Forest's response.

The work of Dr. Six, and many others reviewed in the course of project development, are known to resource specialists. The fact that not all research uniformly agrees on the best approach to forestry management does not vitiate the agency's goals within a project setting. Additionally, because the nature of most scientific literature is narrowly focused to specific research questions, it fails to account for the Forest Service's multiple management objectives within a project. Dr. Six's conclusions regarding the efficacy of treatments to address pine beetle outbreaks does not preclude treatments in these areas for other management objectives, including fuels control and browse enhancement and timber production.

The Forest Service understands that agency actions result in effects to the landscape. This is why the agency examines and discloses these effects in environmental documents. The effects analysis presented in this project is supported with relevant literature, modeling, and scientific expertise. Once the effects of proposed activities are understood in context, there is no need to pursue additional analytical questions. The agency reviews all literature submitted during project development: however, the accumulation of additional studies or data does not mean the effects are greater or become significant.

Issue 1.5 – Evidence for Design Criteria

The objector contends that the EA relied on design criteria and did not conduct sufficient analysis therefore violating NEPA. While it is not clear from objections, the specific violation of NEPA that objectors refer to, Forest Service regulation 36 C.F.R. $\S220.7(b)(3)$ describes the required analysis of an EA:

"... The EA: "(iv) May discuss the direct, indirect, and cumulative impact(s) of the proposed action and any alternatives together in a comparative description or describe the impacts of each alternative separately; and (v) May incorporate by reference data, inventories, other information and analyses."

An objection asserts that "while the discussion, evidence and analysis may support the assertion, the EA fails to incorporate the details to support its position and relies on project files". From the description provided above, the required analysis for an EA includes reference data, inventories, other information as well as the analysis. The aquatics analysis summarizes this data as well as included the details to support its position in the analysis. These details are found in the extensive documentation provided in the Aquatic project file that demonstrate how BMPs reduce sedimentation (Aquatics (021)), and the effectiveness of RHCA's and PACFISH/INFISH buffers (Aquatics 003). This includes literature suggesting that the PACFISH/INFISH buffers effectively prevent the delivery of sediment to streams, as well as literature cited that shows that the same RHCA buffers would also be sufficient to provide riparian functions including litter fall and nutrient input and retention in streams (23 to 46 meters), shade to streams for maintenance of summer stream temperatures (23 to 46 meters), woody debris delivery (30 to 46 meters), and stream bank stability RHCA. This document (Aquatics 003) also discusses the local INFISH/PACFISH monitoring as well as years of Regional monitoring. These data results support the evidence showing that PACFISH/INFISH RHCAs are highly effective at reducing impacts to streams and riparian areas from management activities.

In reviewing the EA and supporting documentation in the project file, it is my determination that the required analysis regarding sedimentation and aquatic effects was completed for this project.

Issue 1.6 – Lack of Cumulative Effects Analysis

An objector requests a lot of information related to "cumulative effects". I have reviewed comments and objection letters, and I cannot find support for the contention that this additional information, beyond what has already been provided in the project analysis, is required to understand cumulative effects.

The purpose of gathering evidence is to explore the relevant environmental concerns to make informed and reasoned conclusions about project effects. The Forest has done so in its analysis. The relationship between the evidence collected and the conclusions found is explained. I specifically reviewed in detail the hydrology analysis in lieu of objectors request for forest-wide data for equivalent clearcut area analysis and questions about cumulative effects bounding. The hydrology analysis directly addresses the use of ECA analysis (PF-Aquatics-17, p. 5). I can find nothing in objections directly raising issue with this analysis.

Further, the spatial and temporal context for project and cumulative effects analysis is explained (PF-Aquatics-005). The cumulative effects area includes all areas where the effects of past, present, and reasonably foreseeable project effects may contribute to project effects.

The project analysis for hydrology complies with NEPA. Additional data collection is unwarranted and would not contribute to understanding project effects analysis or complying with NEPA.

Issue 1.7 – Effects of Dust

An objector contends dust abatement was not properly analyzed and effects from dust are significant, therefore an EIS is required. The Environmental Protection Agency, the Montana Department of Environmental Quality, and the Bitterroot National Forest Plan (pp. II-6 and II-25) require the abatement of particulate matter into the atmosphere, which includes dust from timber harvest operations and log hauling as well as smoke from prescribed fire operations. The Air Quality Specialist Report (p. 5) states that "Road dust is a source for particulates during dry periods in summer and fall in forested areas. This source of particulates is not limited to summer months though as the area can also be impacted to a certain extent as road surfaces dry in winter. Pollution from this source is generally localized as the dust usually settles within close proximity of the road itself" The EA page 8 states that dust would be produced from timber harvest and related activities and would be addressed through Timber Sale Contract mitigation. In other words the Timber Sale Contract will include language to abate dust during operations, including log haul on roads. The EA (p. 15) includes project design criteria to ensure dust abatement on all roads in the immediate vicinity of residences. I conclude that because the Forest Service has properly analyzed effects from dust, and mitigation will occur through project implementation, effects are not significant and an EIS will not need to be prepared.

Issue 2 – National Forest Management Act (NFMA)

Issue 2.1 - Plan Violation of Management Area (MA) 8b

Objectors allege the project violates Forest Plan direction for MA 8b. The Forest Plan allows road building of permanent and temporary roads through this management area under certain conditions, including the need to access adjacent management areas (Forest Plan p. III-63). The project proposes to relocate a portion of Forest Road 74895 through the MA to access units in adjacent MA 2. Additionally, the commercial harvest activities proposed in MA 8b, as described in the EA (see p. 6, p. 11, and discussion pp. 49-51), were designed to improve winter big game forage production, as allowed by the Forest Plan (p. II-62). Commercial harvest activities require construction of temporary roads in MA 8b. Temporary roads are neither system roads, nor permanent roads (see EA p. 8 and Forest Plan p. VI-41). They are constructed to meet project objectives which, in MA 8b, is to increase winter range forest productions.

As described in the Objection Reviewing Officer letter, commercial treatment with temporary road construction may occur within MA 8b as long as it is warranted. Units that don't warrant commercial harvest will be treated with precommercial thinning and prescribed burning within treatment areas within MA 8b. Permanent road construction through MA 8b to access areas in MA 2 is allowed by the Forest Plan and may occur as shown in the Draft Decision. I conclude these actions of permanent road construction, temporary road construction, and commercial timber harvest as brought forward in the EA and draft Decision Notice would not violate the Forest Plan.

Issue 2.2 – Improper analysis of Forest Plan Amendments for Elk and other amendments

Contention 1 – Forest Planning Rule

The objectors contend that a site specific Forest Plan amendment was completed incorrectly. Regulations for the 2012 planning rule at 36 CFR 219.13 address Forest Plan Amendments. Regulations pertinent to this objection state:

- (a) Plans may be amended at any time and be broad or narrow, depending on the need for change. Responsible officials have the discretion to determine whether and how to amend the plan and determine the scope and scale of the amendment. Further, plan amendments are required to add, modify, or remove one or more plan components, or change how or where one or more plan components apply to all or part of the plan area.
 - 1) Amendments must be based on a need to change the plan
 - 2) Amendments must be subject to public notification as required in §219.4.
 - 3) Amendments must be consistent with NEPA procedures
 - 4) Amendments must apply to existing plan components
 - 5) Amendments must determine which specific substantive requirements (§§219.8 through 219.11 Sustainability, diversity of plant and animal communities, multiple use, timber requirements) are directly related to the plan direction being added, modified, or removed by the amendment and apply such requirement(s) within the scope and scale of the amendment.

The Forest Plan amendments included in the project are a site-specific plan amendments to address elk habitat effectiveness, thermal cover, and hiding cover. The amendments are needed because the proposed action does not meet elk related Forest Plan Standards (See EA Appendix C). The EA (p. 7) describes the amendment would improve the existing condition of the project area because implementing the amendment would decrease the density of roads in the analysis area. The project addressed the above criteria of 36 CFR 219.13(a) by the following:

- 1) The Forest Service identified a need to change the plan by describing the purpose of changing objectives and standards (Appendix C, p. C-1).
- 2) The public was notified about the Forest Plan amendment during the comment period on the Draft EA.
- 3) The Forest Service followed NEPA procedures for amendments as the same procedures were followed for this project.
- 4) The amendment applied to existing plan components as described in EA Appendix C (p. C-1).
- 5) The Forest Service determined the substantive requirement the amendments applied is 219.10(a)(5) 10: Multiple Use a- Integrated resource management for multiple use 5 Habitat conditions, subject to the requirements of § 219.9, for wildlife, fish, and plants commonly enjoyed and used by the public; for hunting, fishing, trapping, gathering, observing, subsistence, and other activities (in collaboration with federally recognized Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments). Pages C-2 and C-3 discusses how the plan amendment meets the planning rule requirement.

I conclude that the Forest Service properly completed the Forest Plan amendments compliant with the 2012 Planning rule at 36 CFR 219.13 by following its requirements as shown above.

Contention 2 – Cumulative Impacts of Multiple Forest Plan Amendments over Time

The objectors contend that the Forest Service must consider the cumulative impacts of Forest Plan amendments regarding elk that have been completed over time by the Bitterroot National Forest. Forest Service regulations at 40 CFR §1508.7 address cumulative impacts which are the impact on the environment which results from the incremental change. The Forest Service determined that multiple amendments are appropriate because the proposed action would improve elk habitat and elk population growth is not significantly adversely affected by not meeting forest plan standards. (Wildlife Report, p. 50). Further the Forest Service determined that the elk population on the Bitterroot National Forest has increased drastically since the Forest Plan has been written in 1987. Additionally, better information regarding elk (Millspaugh et al 1998, Ranglack et al 2016, and Crane et al 2016) have illustrated that elk habitat effectiveness is more related to forage abundance and quality road density. The Wildlife Report determined that the project, including the Forest Plan amendment, is of benefit to elk (Wildlife Report p. 51). Because this project is of benefit to elk and elk populations are increasing across the Bitterroot National Forest, I conclude that the Forest Service was compliant with 40 CFR §1508.7 in addressing elk. Multiple Forest Plan amendments regarding elk.

Contention 3 – Proposed Action Consistent with Forest Plan Direction

Objectors state that the project could be remedied with a proposed action that is consistent with the Forest Plan and a new amendment would not be needed. Due to comments received on the Draft EA, the Forest Service included a more detailed discussion concerning the forest plan amendments for elk habitat effectiveness, thermal cover, and hiding cover. Project specific forest plan amendments are required to address elk habitat effectiveness, thermal, and hiding cover since objectives or standards consistent with the 1987 cannot be met. I conclude amendments are appropriate because the proposed action would improve elk habitat and elk population growth is not significantly adversely affected by not meeting forest plan standards. Further, these amendments allow for compliance with the 1987 plan whereas not having these amendments, the Forest service would not be consistent.

Issue 2.3 – 60-day Review Period Required for Even-Aged Harvest

Response:

Objectors contend that a 60-day review period has not been conducted in accordance to NFMA regarding even-aged harvest. Project scoping in September 2017 first notified the public of the project even-aged harvest proposal, and the EA has likewise described the presence of even-aged harvests, these presented at least 60-days of opportunity for the public to comment. The Forest has complied with the 60-day required public notice for even-aged harvest proposals.

Issue 3 - Recreation

Issue 3.1 – OHV Trail

Multiple objectors contend that the Forest Service failed to consider Cold Spring Hill ATV loop proposal in violation of NEPA. I have reviewed the project record and believe the discrepancies in objector's assertions and the Forest's response are due to a miscommunication. The Forest Service in December

2016 communicated the objector's proposal to the State, because the recommended route crosses a section of state land. The state, at that time, responded that current policy would not allow OHV use of the route on this State section. Without access to this State section, the Forest was stating that the gradient is too steep to provide an alternative route. This factor should have been communicated more clearly in the response to the objector's comments.

Nothing in this decision would preclude the Forest and the State exploring this route in the future. At this time, I find the Forest conducted its due diligence investigation of this issue, and has complied with NEPA requirements to consider public comment. The Forest is updating its response to this issue in the Decision Notice.

Issue 3.2 – Timber Harvest will Reduce Hunting Opportunities

Objectors contend the proposed timber harvest will reduce hunting opportunities. Hunting opportunities on public lands relate to the availability of game, as well as food & cover (habitat), population dynamics, game management strategies, recreational access, human activity and numerous other variables. Timber harvest strategies and associated silvicultural prescriptions tend to alter the structure, function, and habitat values of an affected forest stand. A clearcut, for example, will expose the forest floor to sunlight and typically generate early-successional woody growth depending upon slope, aspect, elevation, precipitation, and other variables. Thinning a mature stand, may or may not expose the forest floor to sunlight, depending upon spacing in between trees, canopy cover, and so on. In short, different treatments beget different habitat values, characteristics, structures, and outcomes, and provide varying opportunities for food or cover depending upon the species of game animal at issue.

Depending upon what game species is being hunted, managed forests do not necessarily reduce the quality of hunting opportunities. In some cases, for example, where forest management activities result in increased ground forage, hunting opportunities may be improved. Certainly, human activity effects the movement and feeding patterns of large game animals such as deer and elk. While the immediate disturbance of forest management activities may pose a short term impact to hunting opportunities, in the long run, there will likely be improved hunting opportunities in parts of the project area. Overall, the project will result in a significant net reduction of open road density. This will likely improve big game hunting opportunities over time.

The wildlife analysis in the project file addresses impacts to game and non-game species alike. Where the popular game species elk is concerned, no significant impact to local populations and associated hunting opportunities is likely.

Issue 4 – Roads/Travel/Access

Issue 4.1 – Private Access Rights and Haul Route Identification

The objectors contend that the analysis does not clearly describe the access to unit 10 or the planned haul route. The objector further contends Forest Service Policy requires permanent access rights for access through private land unless there is no foreseeable need for any future access.

Rye Creek Road and the adjoining FS road system provide access to unit 10 as indicated by the DN/FONSI maps. Additional information is covered in the project file's travel analysis (TRANS-001).

FS policy requires legal access for any private land crossing. This may be perpetual or temporary access depending on the circumstances and immediate need of the agency and/or the public. There is no law, policy, or regulation requiring permanent, perpetual haul route access. The Forest Service may use its discretion to determine the most reasonable haul route, and whether a need exists beyond temporary legal access rights. As suggested, permanent legal access to national forest lands is often desirable, but sometimes challenging to acquire.

Note that Project EA map 1 erroneously suggests that two roads lead to private land in section 13 and dead-end at the public-private boundary. This is not actually the case. In reality, the roads connect through the private land in section 13, which is currently owned by the local grazing permitee. A mutually beneficial agreement for temporary hauling access across the permitee's land via a pre-existing road has been negotiated. The landowner was not interested in granting perpetual access across his private land to the Forest Service/public.

Notably, EA pp 21-27 address haul routes and associated impacts. EA Appendices B1-B15 provide extensive information on proposed actions as regard roads, trails and the transportation systems at issue. Further analysis is provided by the Project Travel Analysis (TRANS-001).

Issue 4.2 – Transportation Baseline

Objectors contend that the project fails to utilize an accurate baseline when analyzing the transportation system. Under the "hard look doctrine" the agency must undertake an analysis for its proposed action that is scientifically defensible and interdisciplinary. The agency must genuinely engage in reasoned decision-making. *Greater Boston Television Corp. V. FCC*, 444 F.2d 841, 851 (DC Cir 1970).

The Transportation Analysis in the project record (TRANS-001) includes extensive statistical breakdown of the project area's road and trail categories, use, condition, and proposed changes. Other baseline data provided includes rationale for decision, interdisciplinary environmental analysis, and reference to agency standards for road construction, decommissioning, culvert removal and installation, and other activities (16 USC 1608 et seq., FSM 7700). The project EA and associated appendices and maps provide extensive information relating to the extant road system on the ground, as well as proposed activities as regards the same road system. Effects of proposed actions are reasonably foreseeable and are discussed in the EA and project file. The project EA addresses more than 60 separate road segments and associated actions or proposed status changes.

The project EA and file provide baseline information that is reasonably sufficient to support proposal of activities relating to the transportation system, such as the decommissioning of 39 miles of road, the construction of 4.3 miles of road, and other activities outlined in the NEPA documentation and project file. The Transportation Analysis (TRANS 001) provides extensive baseline for data in the project area. I conclude that the agency took a hard look regarding this issue.

Issue 4.3 – Minimum Road System

Objectors contend that the project fails to identify the minimum road system. The minimum system is the road system determined to be needed to meet resource and other management objectives adopted in the relevant land and resource management plan, to meet applicable statutory and regulatory requirements, to reflect long-term funding expectations, to ensure that the identified system minimizes

adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance. (Travel Management Rule, Subpart A)

During the past two decades, the Forest Service engaged in multiple real estate transactions to consolidate ownerships in the vicinity of what is now the project area. When the Forest Service acquired the former Darby Lumber Lands and other private holdings, these lands contained extensive road system constructed by past owners. The Forest pursues alignment of acquired lands with applicable standards opportunistically in a project by project manner. This project, accordingly, brings the project area into alignment with the concept of the minimum road system (Travel Management Rule, Subpart A). As the EA articulates, the project constructs 4.3 miles of road, while it decommissions 39 miles of road. While there may be short term impacts associated with project activities, there will be significant long term benefits as outlined in the draft DN/FONSI and EA. The project does not violate the minimum road system standard.

Issue 4.4 – Travel Management Rule Compliance

Objectors contend that the project fails to demonstrate compliance with the Travel Management Rule for all proposed changes to motorized access.

A roads or travel analysis is required under the following conditions:

"When proposed road management activities would result in changes in access, such as changes in current use, traffic patterns, and road standards, or where there may be adverse effects on soil and water resources, ecological processes, or biological communities (road construction, reconstruction, and decommissioning), these decisions must be informed by roads analysis (FSM 7712.1) except as provided in section 7712.13c." (36 CFR Part 212, FSM 7712.13).

Key findings of the transportation analysis included:

"This analysis has identified various resource and access issues, and specific opportunities to reduce chronic sediment risk, address water quality impairment issues in two different major drainages, improve Bull Trout habitat conditions in the Sleeping Child Creek watershed, reduce road maintenance obligations and improving EHE, while maintaining reasonable access to support Forest Plan Management Area direction. The assessment suggests stream and riparian condition could be substantially improved by reducing the number of road/stream crossings and road segments that closely parallel streams. This situation exists in both upper Sleeping Child and Rye Creek drainages."

EA pp 21-27 address haul routes and associated impacts. EA Appendices B1-B15 provide extensive information on proposed actions as regard roads, trails and the transportation systems at issue. See also project record Transportation Analysis (TRANS-001).

The transportation system adjustments included in the project should be analyzed holistically rather than in a piecemeal fashion. The project includes construction of new road and trail mileage, but does so largely for the purpose of connecting existing routes for improved recreation opportunities and transportation system efficiencies. On the whole, the project results in a significant reduction of the transportation system mileage, with improved motorized opportunities via newly connected road segments. I conclude that the project does not violate the travel management rule.

Issue 5 - Wildlife

Issue 5.1 – Endangered Species Act (ESA) Compliance

The objectors contended that it appeared that consultation was not conducted for the grizzly bear, lynx or for the proposed wolverine. It was acknowledged that consultation was conducted for the bull trout. The objectors suggested remedy was to complete section 7 consultation with the Fish and Wildlife Service.

As noted, consultation for the Bull Trout was completed and FWS responded on August 14, 2018 with a concurrence letter for the Darby Lumber Lands Phase 2 Project. The wolverine analysis was completed using the Programmatic BA for N.A. wolverine as discussed in the project file (WILD 009). A transmittal letter (WILD 009) and Biological Assessment (WILD 008) for the grizzly bear and lynx was submitted to the FWS on April 5, 2019. Concurrence is pending.

In reviewing the EA and supporting documentation in the project file, it is my determination that the required consultation has been conducted for the Bull Trout and wolverine, and is currently pending for the grizzly bear and lynx and that the Forest Service was complaint with ESA.

Issue 5.2 – Insufficient Wildlife Analysis

Objectors allege that the lynx and grizzly bear analysis is insufficient. The effects call is also questioned with the EA concluding that the call for this project is a "may affect, not likely to adversely affect" for both species. In fact both species are not known to be present in the Project area and habitat for both species is lacking (table 3 in WILD 001). Additionally, no Critical Habitat for either species occurs within the project area or elsewhere on the Bitterroot National Forest (Project BA WILD 008).

Table 9 in WILD 001 discusses how the project is consistent with the Northern Rockies Lynx Management Direction (NRLMD). There is also an extensive analysis showing the existing condition for grizzly bears in WILD 001 as well as an effects analysis. The effects analysis for both species can also be found in the BA (WILD 008) which is currently submitted to the FWS for concurrence.

Objectors also allege that no analysis of MIS species was provided in the EA as to the extent of impacts; and no on-the-ground surveys were conducted to identify occupied areas. NEPA requires an analysis of effects (40 CFR 1508) to the environment. Table 9 in the EA (pages 37-38) discuss the location of the analysis for these species in the document. WILD 001 (project file) covers the analysis of Elk in the Big Game section; pine marten in the wolverine, fisher and pine marten section; and pileated woodpecker in the Migratory Bird section. An in-depth description of the DISTANCE sampling method, results, and discussion is provided in WILD-002 (pages 1-6), showing that ground surveys were conducted for this area.

With the evidence presented above, I conclude that the wildlife analysis conducted for this project was sufficient and meets NEPA (40 CFR 1508).

Issue 6 - Aquatics

Issue 6.1 – Lack of Aquatics Analysis

The objector's assertion of over-reliance on design criteria and how that affects the sufficiency of analysis was discussed in Issue 1.5 above. Impacts to aquatic habitat and species is sediment driven and therefore relies on the same project file documents (regional and local monitoring documents, as well as reliance on BMPs and INFISH/PACFISH direction) discussed in the response to Issue 1.5 above. Direct, indirect and cumulative effects were addressed in the EA as well as the Aquatics specialist report (Aquatics 005), Aquatics BA/BE (Aquatics 001). This document was reviewed by FWS who issued a Letter of Concurrence (Aquatics 002) on August 14, 2018.

Additionally, objectors assert that no analysis was done discussing increased traffic on roads and 54 trails from future motorized recreation, and the resulting sedimentation. Road and trail use and sedimentation was discussed on page 23 of the EA. The existing condition displays the environmental baseline incorporating the past and present impacts (discussed in the AQUATICS 001, Fish BA/BE on page 25). Because of their upland location and considerable distance from fish-bearing streams, future motorized traffic on the motorized trails in the project area is predicted to have no effect on aquatic species (AQUATICS-001, bottom of p. 31; AQUATICS-005, top of p. 14).

In reviewing the EA and supporting documentation in the project file, it is my determination that the required analysis regarding impacts to aquatic habitats and specie was completed for this project.

Issue 6.2 – Clean Water Act (CWA) Compliance

The contentions listed below fall within the objectors contentions that this project failed to comply with the Clean water Act. Section 313 of the Clean Water Act requires that Federal agencies comply with all substantive and procedural requirements related to water quality. Under Section 303 of the Clean Water Act, States have the primary responsibility to develop and implement water quality programs, which include developing water quality standards and Best Management Practices (BMPs).

The AQUATICS-024 document discusses how the Darby Lumber Lands Phase 2 project is consistent with the regulatory framework including the Clean Water Act.

In reviewing the EA and supporting documentation in the project file, it is my determination that the Darby Lumber Lands Phase 2 project demonstrated compliance with the Clean Water Act.

Contention 1 – Forest Service Reliance on Best Management Practices (BMPs) and Design Criteria

An objector contends that that reliance on BMPs and design criteria is misplaced and runs contrary to best available science showing that forest roads are a primary source of sediment delivery and other water quality impairments and is arbitrary and capricious running contrary to science.

AQUATICS-001 (pp. 18, 25-28, 30) and AQUATICS-005 (pgs. 1, 4, 6-7) both acknowledge forest roads as the primary source of sediment in project area watersheds. The effectiveness of the aquatic design criteria that governs log hauling has been documented during numerous BNF timber sales since the early 2000's. The findings have been documented in the Item 22 chapters of the Forest Plan Monitoring Reports (2002 through 2014-15). The Forest Plan Monitoring Reports are included by reference in

AQUATICS-001 (pgs. 62-63) and AQUATICS-005 (p. 22). Local monitoring of design criteria effectiveness was considered when analyzing road-related effects in AQUATICS-001 (pp. 30-50) and AQUATICS-005 (pp. 9-14).

The effects analysis (AQUATICS-001, pgs. 34-35, 38) is based on the observations from a site-specific road survey (AQUATICS-014) and mitigating factors such as road grade, the presence or absence of erosional indicators, and width of vegetative filter (AQUATICS-001, p. 34). The amount of sediment delivery predicted by the WEPP model is expected to be too small to become measurable or observable in the stream (AQUATICS-001, pp. 34, 38; AQUATICS-005, pgs. 12-14; AQUATICS-014, bottom of p. 7). Because the Forest Service incorporated findings from monitoring and surveys I conclude that the analysis and use of Design Criteria and BMPs was not arbitrary and capricious.

Contention 2 – Log Haul Impacts on Water Quality

An objector asserts that: "Allowing use of these road alignments—including log hauling and transport of heavy equipment—will exacerbate the impacts of this road on the riparian area and water quality within Rye Creek itself." The effects of log hauling on riparian areas and water quality was thoroughly analyzed and disclosed in AQUATICS-001 (pp. 31-39), AQUATICS-005 (pp. 12, 14), AQUATICS-014 (pp. 1-8), and AQUATICS-015 (pp 2-4, 9-10). The EA (pp. 23-24, 26-28) summarizes the key findings from these documents. I conclude that the Forest Service analyzed the impacts of log hauling on riparian areas and water quality.

Contention 3 – Forest Plan Consistency - Monitoring

The objector further asserts that: "Failing to provide assurances such as monitoring to ensure maintenance of summer water temperatures to protect existing on and off-forest beneficial uses of water is inconsistent with the Forest Plan."

No specific water temperature monitoring protocol was established to monitor the effects of the Darby Lumber Lands Phase II project. This is because there would be no vegetative changes in any of the RHCA buffers around fish-bearing streams, or around non-fish bearing streams that could potentially contribute water to downstream fish habitat (AQUATICS-001, p. 31; AQUATICS-005, p. 9). Because there would be no changes to shade levels in RHCAs, there would also be no changes to water temperatures that result from project activities (AQUATICS-001, p. 31; AQUATICS-005, p. 9). The effectiveness of RHCA buffers in maintaining water temperatures is discussed in AQUATICS-003. A thorough disclosure of existing water temperature conditions in project area streams can be found on pages 20-25 in AQUATICS-001. Because there are no vegetative changes in any of the RHCA buffers I conclude that the Forest Service was consistent with the Forest Plan.

Issue 7 – Soils

Issue 7.1 – Soil Impact Concerns

Objectors contend the project activities will harm soils in the project area. The EA describes the project area as an environment heavily impacted by past timber harvest and road building, much of which occurred under private ownership. I do not understand the claim that the project area is a "last bastion of undisturbed soils." The Northern Region of the Forest Service uses a scientifically rigorous, ground-truthed based protocol to monitor for soil conditions. Field surveys of soil conditions were performed

for all proposed treatment units. The present condition and anticipated project effects to soils are thoroughly documented in the analysis (see also PF-SOILS-001, and Appendix C of the Draft Decision Notice).

Issue 8 - Vegetation

Issue 8.1 – Insufficient Old Growth Analysis

Objectors contend that the analysis of effects to old growth is lacking. The 1987 Bitterroot Forest Plan identifies stand conditions for old growth consideration Forest-Wide and within specific Management Areas the project which are 1, 2, 3a, and 8b. (pp. II-20, III-4, III-10, III-16, VI-24). Forest wide old growth includes: large trees, generally 15 per acre greater than 20 inches dbh for species other than lodgepole pine and 6 inches for lodgepole pine; canopy closure at 75% of site potential; stand structure usually uneven aged or multistoried; snags, generally 1.5 per acre greater than 6" dbh and 0.5 per acre greater than 20" dbh; more than 25 tons per acre of down material greater than 6" diameter, heart rot and broken tops in large trees common; and mosses and lichens present. Further, Green et al (1992), Old-Growth Forest Types of the Northern Region is the guiding science for old growth, which are contrary (more restrictive) to Forest Plan, however following these requirements ensures Forest Plan compliance. Pages 23-30 describe the eight types of old growth in Western Montana which are found on the Bitterroot National Forest.

Analysis (Silv-002) showed that none of the stands within the project area meet the Green et al. (1992) definition of old growth, nor the 1987 Forest Plan conditions for old growth. I conclude that the Forest adequately addressed the impacts to old growth and was compliant with its Forest Plan and Green et. al (1992).

Issue 8.2 – Failure to Consider Benefits of Mistletoe

Objectors contend the EA does not disclose the benefits of mistletoe to wildlife and forest health. Regulations at 40 CFR 1508.8(b) discusses that effects may be beneficial to the environment. Objectors raised this issue in designated opportunities and commented with the same information. Need for the proposal includes reducing the Douglas-fir mistletoe outbreak (EA p. 3). The Forest Service responded to this comment (DNFONSI-0004 p.6) stating that mistletoe is a natural process. Further the Forest Service provided documentation to SILV-001 that addresses the need to remove mistletoe infected trees within treatment units. This document states the concern for the increase of Douglas-fir dwarf mistletoe in the project area (p. 8, 10) and that although mistletoe is naturally occurring, fire suppression and past management practices has increased infections across the landscape. I conclude that the Forest Service evaluated the effects of dwarf mistletoe appropriately, in compliance with 40 CFR 1508.8(b) and determined the need for treatment based on its impacts on vegetation across the landscape.

Issue 9 – Noxious Weeds

Issue 9.1 – Lack of Adequate Analysis for Noxious Weeds

Objectors allege the Forest Service of improperly addressing the spread of noxious weeds due to commercial timber harvest and roads work. NEPA requires an analysis of effects (40 CFR 1508) to the environment. The Forest Service analyzed effects of activities, including commercial timber harvest and road work, and weed spread in the Invasive Plant Report (p. 5). Further, The Forest Service brought

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forward design criteria and listed them in the EA on pages 12-14. These design criteria will required to be followed in implementation and will reduce the introduction and spread of noxious weeds and invasive plants. I conclude that the Forest Service was complaint with NEPA by considering the effects of activities and the potential to spread weeds, further I find that the use of design criteria is warranted to reduce the spread of weeds.

Issue 10 – Economics

Issue 10.1 – Lack of Sufficient Economic Analysis

Objectors contend the economic analysis is insufficient in regards to roads. Regulations at 40 CFR 1508.8(b) defines the human environment which includes economic impacts. The Forest Service disclosed the costs of project activities, including roads, in its economic analysis (ECON-001) and concluded the project economic benefits not only for providing jobs but there are also benefits of improving forest resiliency (draft Decision Notice p. 8). I conclude that the Forest Service was compliant with CEQ regulations by completing economic effects analysis and summarizing the benefits in the draft Decision Notice.